

## C l a i m s

1. A cooling installation for cooling one or several switchgear cabinets with heat-generating built-in devices arranged on top of each other inside the same, to whom individual cooling bodies are assigned or which themselves are embodied as cooling bodies, wherein these cooling bodies are included in a coolant circuit which is fed from the water outlet side of an air/water heat exchanger via a feed line and a return line

characterized in that

a large heat exchanger (20), or several, parallel operated small heat exchangers (20.1 to 20.6), is (are) housed in a heat exchanger cabinet (10), wherein the interior (11) of the heat exchanger cabinet (10) is coupled via an air inlet opening (13) in the cabinet bottom (12) and an air outlet opening (33) of a double bottom (30) with a central air conditioning arrangement feeding cold air to the double bottom (30),

the cold air (36) supplied to the heat exchanger cabinet (10) is conducted over the large heat exchanger (20) or the small heat exchangers (20.1, 20.6) and cools the coolant flowing therein, and

the water inflow (22) and the water return flow (23) of the large heat exchanger (20) or the small heat exchangers (20.1 to 20.6) are connected with the inflow line and the return flow line of the switchgear cabinets to be cooled.

2. The cooling installation in accordance with claim 1,

characterized in that

the large heat exchanger (20) is installed inclined in the interior (11) of the heat exchanger cabinet (10) and extends over the entire height of the interior (11).

3. The cooling installation in accordance with claim 1,

characterized in that

the small heat exchangers (20.1 to 20.6) are arranged, horizontally aligned, on top of each other and fill the interior (11) of the heat exchanger cabinet (10) except for small gaps between them.

4. The cooling installation in accordance with claim 1 or 2,

characterized in that

a pump (24) and an expansion vessel (25) have been introduced into the inflow line (22) of the large heat exchanger (20).

5. The cooling installation in accordance with claim 1 or 3,

characterized in that

individual pumps (24i) are introduced into the inflow lines of the small heat exchangers (20.1 to 20.6), and an expansion vessel (25i) has been additionally introduced into the inflow line of the uppermost small heat exchanger (20.6).

6. The cooling installation in accordance with one of claims 1 to 5,

characterized in that

a fan (21) is arranged on the heat exchanger cabinet (10), whose air aspiration opening is connected with the interior (11) of the heat exchanger cabinet (10) via an air outlet opening (15) of the latter.

7. The cooling installation in accordance with claim 6,

characterized in that

the fan (21) axially or radially removes the air (38) aspirated from the interior (11) of the heat exchanger cabinet (10) into the air of the space surrounding the heat exchanger cabinet (10).

8. The cooling installation in accordance with one of claims 1, 3 and 5 to 7,

characterized in that

the small heat exchangers (20.1 to 20.6) are connected in parallel by means of a vertical inflow line (26) and a vertical return flow line (27) which extend over the height of the interior (11) of the heat exchanger cabinet (10).

9. The cooling installation in accordance with claim 8,

characterized in that

the inflow line (26) and the return flow line (27) are connected with each other in the upper area of the interior (11) via a connecting line (28) with a venting device (29).

10. The cooling installation in accordance with claim 9 or 10,

characterized in that  
in connection with a heat exchanger cabinet (10) with a rack and sheathing elements, the inflow line (26) and the return flow line (27) are conducted in a receptacle or a hollow space of vertical frame legs of the rack.

11. The cooling installation in accordance with one of claims 1 to 10,

characterized in that  
the switchgear cabinets provided with built-in devices are connected with a bottom opening in the double bottom (30) and are supplied with cold air for additional cooling of the built-in devices.